## What is claimed is:

- 1. A vessel system for treating and/or storing liquids comprising
- (a) a two-dimensional vessel arrangement of a plurality of vessels, wherein the vessels are open at the top and are interconnected to form a unit and each vessel of said vessel arrangement is connected to at least one other vessel of said vessel arrangement via a flexible connecting member; and
- (b) a two-dimensional closure arrangement of closure elements corresponding to the vessel arrangement, wherein the openings of the vessels can be closed with the closure elements and each of the closure elements is connected to at least one other closure element of the two-dimensional closure arrangement via a flexible connecting member that allows a change in the distance between the closure elements.
- A vessel system according to claim 1, wherein said two-dimensional vessel arangement is square.
- 3. A vessel system according to claim 1, wherein said flexible connecting member comprises a cross part between two closure elements, said cross part extending transversely to the connecting line between the closure elements.
- A vessel system according to claim 1, wherein said two-dimensional vessel arrangement includes a barcode carrier for carrying a barcode label.
- A vessel system according to claim 1, wherein said closure elements have a
  cylindrical recess open at the top into which a pin can be pressed to close the openings of
  the vessels.
- 6. A vessel system according to claim 5, further comprising a closure device that comprises a handle and a pin for introduction into the cylindrical recess in order to press the closure elements into the vessel openings.
- 7 A method for performing temperature cycles comprising
- (a) introducing a nucleic acid sample into a vessel system, wherein the vessel system comprises

- (1) a two-dimensional vessel arrangement of a plurality of vessels, wherein the vessels are open at the top and are interconnected to form a unit and each vessel of said vessel arrangement is connected to at least one other vessel of said vessel arrangement via a flexible connecting member; and
- (2) a two-dimensional closure arrangement of closure elements corresponding to the vessel arrangement, wherein the openings of the vessels can be closed by the closure elements and each of the closure elements is connected to at least one other closure element of the closure arrangement via a flexible connecting member that allows a change of the distance between the closure elements; and
- (b) varying the temperature of the vessel system.